

WHAT IS CLAIMED IS:

Sub
H1

1. An endoscope image sensing apparatus comprising:
 - an image sensing section for obtaining an image signal by photoelectrically converting an object image;
 - 5 a conversion matrix section capable of changing a setting associated with a conversion matrix to a desired setting, the conversion matrix being used to convert the image signal, obtained by said image sensing section, into a video signal, by a predetermined matrix computation; and
 - 10 an input section for inputting information about a change in the setting associated with the conversion matrix.
- 15 2. An apparatus according to claim 1, wherein said conversion matrix section includes a color adjustment processing section for performing color adjustment processing, and changes a setting associated with conversion performed by said conversion matrix section on the basis of a gain coefficient set when the color adjustment processing is performed.
- 20 3. An apparatus according to claim 1, wherein said image sensing section is a one-chip color CCD, and said conversion matrix section converts luminance and color difference signals into primary color signals.
- 25 4. An apparatus according to claim 1, further comprising:

00496061.000100

a storage section in which a plurality of settings associated with the matrix computation are stored in advance; and

5 a control section for changing the setting by selecting one of the plurality of settings stored in said storage section in accordance with a command from said input section.

09495061.020100
10 5. An apparatus according to claim 4, wherein said image sensing section is a one-chip color CCD, and said conversion matrix section converts luminance and color difference signals into primary color signals.

15 6. An apparatus according to claim 4, wherein said conversion matrix section includes a color adjustment processing section for performing color adjustment processing, and changes a setting associated with conversion performed by said conversion matrix section on the basis of a gain coefficient set when the color adjustment processing is performed.

20 7. An apparatus according to claim 6, wherein said image sensing section is a one-chip color CCD, and said conversion matrix section converts luminance and color difference signals into primary color signals.

25 8. An apparatus according to claim 6, wherein the color adjustment processing is white balance processing, and said color adjustment processing section is a white balance processing section.

9. An apparatus according to claim 8, wherein

10. An endoscope image sensing apparatus comprising:

a conversion matrix section for converting the image signal obtained by said image sensing section into a video signal by a predetermined matrix computation;

a control section for changing a setting associated with the conversion performed by said conversion matrix section on the basis of designation performed by said designating section.

12. An apparatus according to claim 10, wherein said apparatus further comprises a storage section in which coefficients associated with the matrix computation are stored in advance, and said control section reads out a coefficient corresponding to the

designation and stored in said storage section, and outputs the coefficient to said conversion matrix section.

5 13. An apparatus according to claim 10, wherein said storage section is a ROM.

14. An endoscope image sensing apparatus comprising:

a light source for irradiating an object with light;

10 an image sensing section for obtaining an image signal by photoelectrically converting an object image;

a conversion matrix section for converting the image signal obtained by said image sensing section into a video signal by a predetermined matrix computation;

15 a communication section for serially communicating with said light source; and

a control section for performing serial communication with said light source through said communication section, receiving an identification signal associated with said light source, recognizing a type of said light source, and changing a setting associated with conversion performed by said conversion matrix section on the basis of the type.

25 15. An apparatus according to claim 14, wherein said apparatus further comprises a storage section in which coefficients associated with the matrix

09496061.020100

computation are stored in advance, and said control section reads out a coefficient associated with the type of light source from said storage section, and outputs the coefficient to said conversion matrix section.

16. An apparatus according to claim 15, wherein said storage section is a ROM.

17. An endoscope image sensing apparatus comprising:

a light source for irradiating an object with light;

an image sensing section for obtaining an image signal by photoelectrically converting an object image;

a conversion matrix section for converting the image signal obtained by said image sensing section into a video signal by a predetermined matrix computation;

a white balance processing section for performing white balance processing; and

a control section for recognizing a type of light source on the basis of a magnitude of a gain coefficient set when the white balance processing is performed, and changing the setting associated with said conversion matrix section on the basis of the type of light source.

18. An apparatus according to claim 17, wherein said apparatus further comprises a storage section

001020-19095460

in which coefficients associated with the matrix computation are stored in advance, and said control section reads out a coefficient corresponding to the type of light source obtained on the basis of a gain coefficient from said storage section, and outputs the coefficient to said conversion matrix section.

19. An apparatus according to claim 17, wherein said white balance processing section determines gain amounts of red and blue light components on the basis of results obtained by calculating red of a screen average/green of a screen average and blue of a screen average/green of a screen average.

20. An apparatus according to claim 18, wherein said storage section is a ROM.

21. An apparatus according to claim 10, wherein said apparatus further comprises a display section for displaying a setting associated with conversion performed by said conversion matrix section, and when a setting associated with conversion performed by said conversion matrix section is changed by said designating section, said display section can be referred to.

22. An endoscope image sensing method comprising the steps of:

obtaining an image signal by photoelectrically converting an object image;

changing a setting associated with a conversion matrix to a desired setting, the conversion matrix

09496061.020100

```

inputting information about a change in the
5  setting associated with the conversion matrix.

```

24. A method according to claim 22, further
15 comprising the steps of:

changing the setting on the basis of a desired
setting selected from the plurality of settings stored
in said storage section in the step of inputting.

25. A method according to claim 24, wherein the step of performing conversion matrix processing further comprises the step of performing color adjustment processing, and the method further comprises the step of changing a setting associated with conversion performed in the step of performing conversion matrix processing on the basis of a gain coefficient set when

oc
di
si
in
ng

26. A method according to claim 25, wherein the color adjustment processing is white balance processing, and the step of performing color adjustment processing is the step of performing white balance processing.